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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,876	04/16/2001	Mark Vange	CIRC020	5569

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HOGAN & HARTSON LLP  
ONE TABOR CENTER, SUITE 1500  
1200 SEVENTEENTH ST  
DENVER, CO 80202

EXAMINER

ISMAL, SHAWKI SAIF

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/835,876	VANGE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shawki S Ismail	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 16 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) <sup>o</sup>   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ <sup>o</sup> | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

1. Claims 1-31 are presented for examination.

Claim for priority is acknowledged.

### ***Claim Rejections - 35 USC §102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-6, 8-12, 14-31 are rejected under 35 U.S.C. 102(e) as being anticipated by **Curry et al., (Curry)** U.S. Patent No. **6,078,582**.
4. As to claim 1, Curry teaches a method for implementing functionality within a network on behalf of first and second computers communicating with each other through the network, the method comprising the acts of:
  - providing a front-end computer within the network having an interface for communicating data traffic with the first computer (col. 4, lines 16-17);
  - providing a back-end computer within the network having an interface for communicating data traffic with the second computer (col. 4, lines 19-22);
  - providing a communication channel coupling the front-end computer and the back-end computer (col. 4, lines 24-30); and

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encoding data traffic over the communication channel in a first process in the front-end computer (col. 4, lines 13-38);

encoding data traffic over the communication channel in a second process in the back-end computer, wherein the first process and the second process implement compatible semantics (col. 4, lines 13-38).

5. As to claim 2, Curry teaches the method of claim 1 wherein the processes implemented in the front-end and back-end computer are characterized in that they operate above an OSI-model network layer (col. 9, lines 47-60).

6. As to claim 3, Curry teaches the method of claim 1 wherein the processes implemented in the front-end and back-end computer operate at a user-level (col. 4, lines 13-38).

7. As to claim 4, Curry teaches the method of claim 1 wherein the act of encoding comprises: communicating quality of service information about the communication channel between the front-end and back-end computers (col. 13, lines 3-7).

8. As to claim 5, Curry teaches the method of claim 1 wherein the act of encoding comprises: communicating time-base synchronization information between the front-end computer and the back-end computer (col. 4, lines 43-50).

9. As to claim 6, Curry teaches the method of claim 1 wherein the act of encoding comprises compression/decompression processes (col. 2, lines 29-43).

10. As to claim 8, Curry teaches the method of claim 1 wherein the act of encoding comprises forward error correction processes (col. 10, lines 66-67).

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11. As to claim 9, Curry teaches a system for transporting data through a network comprising:

a plurality of client applications generating requests for network services (col. 5, lines 11-32);

a plurality of network servers configured to provide services in response to received requests (col. 5, lines 11-32);

a front-end server within the network having a first interface configured to handle request/response traffic with the client applications (col. 4, lines 16-17);

a back-end server within the network having a first interface configured to handle request/response traffic with a selected set of network servers (col. 4, lines 19-22);

a communication channel through the network between the front-end web server and the back-end web server (col. 4, lines 24-30).

12. As to claim 10, Curry teaches the system of claim 9 wherein the front-end server and back-end server are time synchronized and the back-end server comprises means for ascertaining when a request/response was issued by the front-end server (col. 4, lines 43-50).

13. As to claim 11, Curry teaches the system of claim 9 wherein the front-end server and back-end server are time synchronized and the front-end server comprises means for ascertaining when a request/response was issued by the back-end server (col. 4, lines 43-50).

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14. As to claim 12, Curry teaches the system of claim 9 wherein the front-end server and back-end server include compression mechanisms for compressing traffic transported across the communication channel (col. 16, lines 34-42).

15. As to claim 14, Curry teaches the system of claim 9 wherein the front-end server and back-end server include forward error correcting mechanisms for error correcting traffic transported across the communication channel (col. 10, lines 66-67).

16. As to claim 15, Curry teaches a system for transporting data through a network comprising:

- a plurality of network-connected applications generating requests for network services (col. 5, lines 11-32);

- a plurality of network-connected computers configured to provide services in response to received requests (col. 5, lines 11-32);

- a plurality of front-end computers each having at least one interface configured to handle request/response traffic with the network-connected applications (col. 4, lines 16-17);

- a plurality of back-end web computers each having at least one interface configured to handle request/response traffic with a selected set of the network-connected computers (col. 4, lines 19-22); and

- a many-to-many communication channel through the network between the front-end web computers and the back-end web computers (col. 4, lines 24-30).

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17. As to claim 16, Curry teaches the system of claim 15 wherein the many-to-many communication channel is dynamically re-configurable (col. 13, lines 10-15).

18. As to claim 17, Curry teaches a system for transporting data through a network comprising:

- a plurality of client applications generating requests for network services;
- a plurality of network servers configured to provide services in response to received requests (col. 5, lines 11-32);

- a front-end web server having at least one interface configured to handle request/response traffic with the client applications (col. 5, lines 11-32);

- a plurality of back-end web servers each having at least one interface configured to handle request/response traffic with a selected set of network servers (col. 4, lines 16-17); and

- a one-to-many communication channel through the network between the front-end web server and the back-end web servers (col. 4, lines 24-30).

19. As to claim 18, Curry teaches a system for transporting data through a network comprising:

- a plurality of client applications generating requests for network services (col. 5, lines 11-32);

- a plurality of network servers configured to provide services in response to received requests (col. 5, lines 11-32);

- a front-end web server having at least one interface configured to handle request/response traffic with the client applications (col. 4, lines 16-17);

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a one-to-many communication channel through the network between the front-end web server and the network servers (col. 4, lines 24-30).

20. As to claim 19, Curry teaches a data transport mechanism comprising:

an interface for communicating data with a plurality of data transport links (col. 6, lines 13-17);

a blender operable to multiplex the data from the plurality of data transport links into a shared-bandwidth channel (col. 13, lines 3-26).

21. As to claim 20, Curry teaches the transport mechanism of claim 19 wherein the plurality of data transport links comprise fixed-bandwidth links (col. 13, lines 3-26).

22. As to claim 21, Curry teaches the transport mechanism of claim 19 wherein the plurality of data transport links comprise a homogenous set of user-level protocols (Fig. 3, col. 9, lines 9-39).

23. As to claim 22, Curry teaches the transport mechanism of claim 19 wherein the plurality of data transport links comprise a heterogeneous set of user-level protocols (Fig. 3, col. 9, lines 9-39).

24. As to claim 23, Curry teaches the transport mechanism of claim 19 wherein the plurality of data transport links comprise a homogenous set of transport layer protocols (Fig. 3, col. 9, lines 9-39).

25. As to claim 24, Curry teaches the transport mechanism of claim 19 wherein the plurality of data transport links comprise a heterogeneous set of transport layer protocols (Fig. 3, col. 9, lines 9-39).



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26. As to claim 25, Curry teaches the transport mechanism of claim 19 wherein the plurality of data transport links comprise a homogenous set of physical layer protocols (Fig. 3, col. 9, lines 9-39).

27. As to claim 26, Curry teaches the transport mechanism of claim 19 wherein the plurality of data transport links comprise a heterogeneous set of physical layer protocols (Fig. 3, col. 9, lines 9-39).

28. As to claim 27, Curry teaches the transport mechanism of claim 19 wherein the shared bandwidth channel pools channel maintenance overhead over the plurality of data transport links (col. 13, lines 3-26).

29. As to claim 28, Curry teaches the transport mechanism of claim 19 wherein the shared bandwidth channel composes data packets by selecting data from the plurality of data transport links (col. 13, lines 3-26).

30. As to claim 29, Curry teaches the transport mechanism of claim 19 wherein the blender regulates a portion of the shared bandwidth allocated to particular one the plurality of data transport links by controlling the rate at which data from the particular link is placed into the data packets during composition (col. 13, lines 3-26).

31. As to claim 30, Curry teaches the transport mechanism of claim 19 wherein the blender regulates a portion of the shared bandwidth allocated to particular one the plurality of data transport links by controlling the order at which data from the particular link is placed into the data packets during composition (col. 13, lines 3-26).

32. As to claim 31, Curry teaches the data transport mechanism comprising:

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an interface for communicating data with a plurality of data transport links (col. 6, lines 13-17);

a blender operable to combine the data from the plurality of data transport links into a shared-bandwidth channel (col. 13, lines 3-26); and

means for applying rate control to the shared-bandwidth channel such that rate control is aggregated across all of the plurality of data transport links (col. 13, lines 3-26).

### ***Claim Rejections - 35 USC § 103***

33. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

34. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Curry et al., (Curry)** U.S. Patent No. **6,078,582** and in view of **Aziz et al., (Aziz)** U.S. Patent No. **5,548,646**.

35. As to claims 7 and 13, Curry teaches the enclosed invention as disclosed above. Curry does not explicitly teach wherein the front-end and the back-end servers include encryption mechanism for encrypting traffic transported across the communication channel.

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Aziz teaches system and method for automatically encrypting and decrypting data packets between sites on the Internet or other networks of computer networks (col. 2, lines 27-45).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to incorporate Aziz's encrypting/decrypting techniques into the invention of Curry in order to make the system more secure and safer. With the use of encrypting/decrypting techniques users are able to transmit sensitive information via the Internet and the information be secured from uninvited eyes as it traverses the internetwork (col. 1, lines 13-21).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawki S Ismail whose telephone number is 571-272-3985. The examiner can normally be reached on M-F 8:30 - 5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shawki Ismail  
Patent Examiner  
November 22, 2004



**HOSAIN ALAM**  
**SUPERVISORY PATENT EXAMINER**